ABSTRACT OF THE DISCLOSURE

A system for and method of testing AC coupled interconnects using boundary scan test methodology. Specially designed AC boundary scan cells and boundary scan logic are used. These are intended to be compatible with conventional IEEE Standard

5   1149.1 testing. A method known as *AC_EXTEST* is used to determine the reliability of the AC coupled interconnections. The method includes preloading the test stimulus, initiating the *AC_EXTEST* instruction, executing the *AC_EXTEST* instruction, transferring the *AC_EXTEST* instruction results, and evaluating the *AC_EXTEST* results. During the test, the TAP controller of both the driving IC and the receiving IC is held in

10   the *Run-Test/Idle* state for the time required to complete execution of the instruction. During this controller state, the driving IC is applying the AC test stimulus to the interconnections and the receiving IC is sampling the signal. The test may be repeated with different test data and may be run together with a conventional DC *EXTEST* method to determine the reliability of both the AC and the DC coupled interconnections

15   independently.